

In the Abstract

Please replace the Abstract as presented in the underlying International Application No. PCT/EP03/01749 with the following amended Abstract:

ABSTRACT

~~The invention relates to a~~ A method for re-grinding and polishing free-form surfaces, especially rotationally symmetrical aspherical optical lenses by tools. ~~According to the inventive method, in which~~ the virtual levelling of a coarsely pre-grinded lens, for example, is calculated by interferometric measurement and by calculation with a desired form; pressure, rotational speed and sojourn time of the tools are controlled by means of said virtual levelling and the surface of the ~~lense~~ lens, for example, is divided up into partial areas. The partial areas correspond to the size of the tools. A zeroized approximation is calculated for the control of the tools. Said zeroized approximation enables the interaction of the partial areas to be estimated. By taking into account the estimated interaction, a sojourn time for each tool on each partial area is calculated as a function of pressure and rotational speed of the tool for each partial area, using a linear equation system and the tools are controlled accordingly. The invention also relates to tools and tool arrangements in addition to especially precise aspherical lenses.